

Notice of Allowability

Application No.

09/931,585

Examiner

Kevin S Wood

Applicant(s)

O'CONNOR ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6 December 2004.
2. ☒ The allowed claim(s) is/are 5,7-10,13,14,21,24-27,30,32,33,36 and 42-61.
3. ☒ The drawings filed on 08 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 5/20/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


AKM ENAYET ULLAH
PRIMARY EXAMINER

ALLOWANCE

Response to Petition

1. This action is responsive to the Petition filed on 6 December 2004. The examiner has thoroughly reviewed the Petition. The applicant's arguments, with respect to whether there is evidence of a "serious burden" sufficient to support the restriction requirement have been fully considered and are persuasive. The Requirement for Restriction mailed on 11 August 2004 has been withdrawn.
2. Claims 5, 7-10, 13, 14, 21, 24-27, 30, 32-33, 36, and 42-61 are pending in the application. These claims were last amended in the Applicant's Amendment filed on 20 May 2004.

Allowable Subject Matter

3. Claims 5, 7-10, 13, 14, 21, 24-27, 30, 32-33, 36, and 42-61 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Referring to claims 5, 13, and 42-52, the prior art does not disclose a mixer for substantially mixing at least two of the plurality of fluids, wherein the light beam interacts with the resulting mixture.

Referring to claims 7-9, 14 and 53-55, the prior art does not disclose the fluids being immiscible, where the first fluid defines a plug, and the manipulation means includes a deformable flexible member in fluid communication with the first fluid plug.

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Referring to claims 24, 26, and 27, the prior art does not disclose that the manipulation of the first fluid plug is performed by deforming a flexible member in fluid communication with the microfluidic channel.

Referring to claim 25, the prior art does not disclose that the plurality of electrodes induces an electrokinetic or electrophoretic pressure gradient within the microfluidic channel to manipulate the first fluid plug.

Referring to claim 30, 32 and 33, the prior art does not disclose that the fluid is substantially absorptive of at least a portion of the spectrum emitted by the light source and that the deformable member is substantially reflective of at least a portion of the spectrum emitted from the light source.

Referring to claim 36, the prior art does not disclose that the deformable member is substantially reflective of the emitted from the light source.

Referring to claims 56-61 and 21, the prior art does not disclose a stencil layer having a microfluidic channel defined through the entire thickness of the stencil layer.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin S. Wood



AKM ENAYET ULLAH
PRIMARY EXAMINER